Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) An image processing apparatus comprising:

sorting first means for ~~executing sorting processing of~~ obtaining a processed image by sorting ~~a train of~~ pixels ~~values within the same line~~ of ~~a radiation~~ an original image ~~and thus rearranging the train of pixel values within the same line~~ into an order from pixels having higher pixel values to pixels having lower pixel values;

~~analyzing~~ second means for calculating a characteristic value from a predetermined region of the processed image ~~after the sorting processing~~; and

gradation transforming means for executing gradation transformation processing of the ~~radiation~~ original image based on the characteristic value.

2.   (Currently Amended) The apparatus according to claim 1, further ~~comprised of~~ comprising:

irradiation region recognizing means for extracting an irradiation region ~~region~~ from the ~~radiation~~ original image,

wherein said ~~sorting~~ first means executes the sorting ~~process of the radiation~~ images within the extracted irradiation region ~~region~~.

3.   (Currently Amended) The apparatus according to claim 1, wherein the predetermined region for the calculation by said ~~analyzing~~ second means is set as a region separated at a predetermined distance from an end on ~~the side of a low pixel value~~ a low-pixel-value side in the processed image ~~having undergone the sorting processing~~.

4.   (Currently Amended) The apparatus according to claim 1, wherein the ~~radiation~~ original image contains one or more regions of a gas part and a spinal part in the image.

5.   (Currently Amended) An image processing apparatus comprising:

radiation generating means for generating radiation;

a ~~two-dimensions~~ <u>two-dimensional</u> X-ray sensor for transforming the radiation into ~~a radiation~~ <u>an original</u> image;

~~sorting~~ <u>first</u> means for ~~executing sorting processing of~~ <u>obtaining a processed image by</u> sorting ~~a train of~~ pixel<u>s</u> ~~values within the same line~~ of the ~~radiation~~ <u>original</u> image ~~and thus rearranging the train of pixel values within the same line~~ <u>into an order</u> from pixels having higher pixel values to pixels having lower pixel values;

~~analyzing~~ <u>second</u> means for calculating a characteristic value from a predetermined region of the <u>processed</u> image ~~after the sorting processing~~; and

gradation transforming means for executing gradation transformation processing of the ~~radiation~~ <u>original</u> image based on the characteristic value.

6.   (Currently Amended) An image processing method comprising:

a ~~sorting~~ step of ~~executing sorting processing of~~ <u>obtaining a processed image</u> sorting ~~a train of~~ pixel<u>s</u> ~~values within the same line~~ of ~~a radiation~~ <u>an original</u> image <u>into an order</u> ~~and thus rearranging the train of pixel values within the same line~~ from pixels having higher pixel values to pixels having lower pixel values;

an ~~analyzing~~ <u>a second</u> step of calculating a characteristic value from a predetermined region of the <u>processed</u> image ~~after the sorting processing~~; and

a gradation transforming step of executing gradation transformation processing of the ~~radiation~~ <u>original</u> image based on the characteristic value.

7.   (Currently Amended) A program <u>stored on a computer-readable medium</u> for making a computer realize said image processing method according to claim 6.

8.   (Cancelled)